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TI Sudden infant death: No evidence for linkage to common polymorphisms in the uncoupling protein-1 and the beta3-**adrenergic receptor** genes.
AU Fatemi, Ali; Item, Chike; Stoeckler-Ipsiroglu, Sylvia; Ipsiroglu, Osman; Sperl, Wolfgang; Patsch, Wolfgang; Strobl, Wolfgang (1)
CS (1) Department of Medical Chemistry, University of Vienna, Waehringerstrasse 10, 1090, Vienna: wolfgang.strobl@univie.ac.at Austria
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AB Thermal stress has been postulated to play a major role in the aetiology of sudden infant death (SID). The human uncoupling protein-1 (UCP-1), expressed in brown adipose tissue dissipates the transmitochondrial proton gradient as heat and plays a central role in energy homeostasis and thermogenesis. A common Bcl I polymorphism in the promoter region of the UCP-1 gene is associated with reduced UCP-1 adipose tissue mRNA and obesity. In addition, a common sequence variation in the beta3-**adrenergic receptor** gene (beta3-AR), Trp64Arg, has been linked to a decreased resting metabolic rate. To determine whether the UCP-1 Bcl I polymorphism and/or the Trp64Arg variant of beta3-AR are associated with the occurrence of SID, we determined the **allele** frequencies of these polymorphisms in 53 Austrian SID victims and 54 controls by nested PCR and restriction digestion using DNA extracted from Guthrie cards. We found that the **allele** frequencies of both polymorphisms did not differ between the SID and control groups (0.65/0.35 versus 0.72/0.28 for UCP-1 Bcl I, and 0.89/0.11 versus 0.93/0.07 for beta3-AR Trp64Arg in SID victims versus controls, respectively). Conclusion: Our data do not support a major association between the occurrence of sudden infant death and two common functional polymorphisms in the human uncoupling protein-1 and beta3-**adrenergic receptor** genes.